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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/730,011	12/05/2000	Richard Vandervoort Cox	1999-0767A	6590

7590 11/01/2005

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EXAMINER	
OPSASNICK, MICHAEL N	

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/730,011	COX ET AL.	
	Examiner	Art Unit	
	Michael N. Opsasnick	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,4 and 5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,4,5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Cong et al (6044343) in view of Li et al (5704004) in further view of Aoyagi (5826221).

As per claim 2, Cong et al (6044343) teaches a method of generating speech coding parameters in a bitstream based front end of a speech recognition system (Fig. 1, subblocks 304,314,312,316) wherein an observation sequence is generated (Fig. 3, subblock 317, into 307, into 306) based on LSP calculations (col. 9 lines 40-65). Cong et al (6044343) also teaches the euclidean distance between the LSP's (col. 2 lines 63-66, and col. 6 lines 5-7).

Cong et al (6044343) does not explicitly teach a method for detecting an erased frame and deleting a frame based on thresholding parameter values, however, Li et al (5704004) teaches a method for defining a steady state threshold T (col. 6 lines 1-9 --

equivalent as detecting an erased frame). Therefore, it would have been obvious to one of ordinary skill in the art of speech processing to modify the teachings of Cong et al (6044343) with thresholding and frame deletion because it would advantageously generate a new and shorter sequence of error-free vectors in order to save system processing time (Li et al (5704004), col. 1 lines 34-36).

The combination of Cong et al (6044343) in view of Li et al (5704004) teaches detection of erased frames and deleting frames based upon thresholding values, however, the combination does not explicitly teach the concept of using surrounding or adjacent LSP values in adjacent frames for the threshold calculation, however, Aoyagi (5826221) teaches a method for defining a threshold based upon the difference in LSP parameters in adjacent subframes (col. 4 lines 25- 50; the calculations performed by Aoyagi teaches the concept of using surrounding LSP information, and interpolating the LSP information, including a frame error calculation, to correct the frame error → col. 4 line 45 – col. 5 line 10). Therefore, it would have been obvious to one of ordinary skill in the art of speech processing to modify the teachings of the combination of Cong et al (6044343) in view of Li et al (5704004) with using an adjacent frames to cure frame error because it would advantageously generate a more accurate representation of speech (Aoyagi (5826221),col. 2 lines 18-24).

3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cong et al (6044343) in view of Li et al (5704004) in further view of Aoyagi (5826221) in further view of Maeda (6230124).

As per claims 4,5, the combination of Cong et al (6044343) in view of Li et al (5704004) in further view of Aoyagi (5826221) does not explicitly teach performing frame erasure based on an error in the most sensitive bits, especially based on lsp information and gain information, however, Maeda (6230124) teaches detecting an error by check code created from the most important bits, esp. lsp information and gain information (col. 2 lines 9,58-61; col. 2 line 9, table 1, col. 10 lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Cong et al (6044343) in view of Li et al (5704004) in further view of Aoyagi (5826221) to detect a frame erasure based on error bits because it would improve the quality of the signal by preventing transmission path errors (Maeda (6230124), col. 1 lines 36-38,46-47).

Response to Arguments

4. Applicant's arguments filed 8/23/2005 have been fully considered by the examiner and are not persuasive. On pages 2-3 of the response, applicant's representative argues against the Cong reference as well and the Lee reference not teaching a distance measurement using adjacent frames. Examiner notes that the Aoyagi reference is used to teach the limitation of

using adjacent frames to perform the distance measurement (see rejection presented above). Furthermore, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As per applicants arguments against the Maeda reference, examiner notes that a CRC is a well known error checking algorithm.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
10/28/05

W. R. YOUNG
PRIMARY EXAMINER